

NPIC/TSG/RED/SDB-043-70
25 September 1970

MEMORANDUM FOR: Chief, Systems Research Branch, RED/TSG

SUBJECT : Evaluation of Stereogram Printer Optical Development
Final Report

25X1

1. This seems like a good and useful idea, however -

Para. 7.a., pg 6 - Resolution of 200 l/mm @ 2X is 100 l/mm/
power - tremendous!! Would appear not possible. Even if computer
produced MTF curves predicted 200 l/mm, similar experience with
the ASR would indicate that something like 125-150 l/mm would be more
practical and likely to be achieved.

Pg 7 - It would seem that the Pechan prism is going to be a
large piece of glass - over 7 inches on the diagonal. This may be
difficult to make to sufficient accuracy and quality. A Pechan in
this position also has influence on the resolution, in that rotation
may degrade resolution in certain orientations of the prism.

Fig. B-7, pg B-12 - This design, and all the designs actually,
achromatizes at F and C. Modern Optics, Brown, pg 199-200, suggests
that this correction is best for visual achromatism, whereas correction
at D and G is better for photographic achromatism.

Fig. B-8, pg B-14 - As a very gross estimate, it would appear
that the transmission through all this glass is something less than
5%. With 2.0 density film in the object space, total transmission
becomes less than 1/2%. Problem?

2. In general, their whole previous effort appears fragmented and
rather inconclusive - so much so it makes you wonder on what they base
their predictions. I, personally, am strongly suspicious of their ability
to achieve their stated goals. In resolution, for instance, I would guess
that they would achieve something closer to 60%, say, of what they consider
possible.

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